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What is Claimed is:

1. A method for reducing acidic contamination on a process wafer following a plasma etching process comprising the steps of:

providing an ambient controlled heating chamber for accepting transfer of a process wafer under controlled ambient conditions;

transferring the process wafer to the heating chamber under controlled ambient conditions following plasma etching of the process wafer;

providing a heat exchange surface within the heating chamber for mounting the process wafer in heat exchange relationship thereto;

mounting the process wafer on a heat exchange surface contained within the heating chamber;

heating the process wafer to a temperature sufficient to vaporize an acidic residue thereon to form acidic vapors; and

removing the acidic vapors from the heating chamber.

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2. The method of claim 1, wherein the step removing the acidic vapors is carried out simultaneously with the step of heating the process wafer.

3. The method of claim 2, wherein the steps of heating the process wafer and removing the acidic vapor are carried out for a period of time sufficient to remove from about 50 percent to about 100 percent of the acidic residue.

4. The method of claim 1, wherein the step of transferring the process wafer to the heating chamber is carried out prior to transferring the process wafer to an unloading chamber for unloading the process wafer.

5. The method of claim 1, wherein the process wafer is heated within a temperature range of about 75°C to about 100°C.

6. The method of claim 5, wherein the ambient pressure within the heating chamber is maintained within a range of 10 milliTorrr to 500 milliTorrr.

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7. The method of claim 6, wherein the step of heating the process wafer is carried out for a period of about 30 to about 90 seconds.

8. The method of claim 1, wherein the heat exchange surface is supplied with a heat exchange fluid.

9. The method of claim 8, wherein the heat exchange fluid is supplied in fluid communication with a heat exchanger.

10. The method of claim 9, wherein the heat exchanger is provided with means for sensing a fluid flow rate and means for sensing a temperature.

11. The method of claim 10, wherein at least one of the fluid flow rate and the temperature is controllably selected by a computer.